

THE CLAIMS

1. (Original) A method of testing a pair of thin films, each thin film being formed by a material desired for use as a different one of a pair of contact materials, to obtain information that is usable in a determination whether at least one of the pair of contact materials is appropriate for use as a contact material in a switch, comprising:
performing at least one atomic force microscopy measurement relating to a predetermined characteristic of the pair of contact materials on the pair of thin films after they contact each other with a first controlled force.
2. (Previously Presented) The method according to claim 1 wherein:
the predetermined characteristic is a contact resistance; and
the step of performing the atomic force microscopy measurement comprises obtaining a contact resistance value between the pair of thin films when the pair of thin films contact each other with the first controlled force.
3. (Previously Presented) The method according to claim 1 wherein:
the predetermined characteristic is a current-dependent stiction force; and
the step of performing the atomic force microscopy measurement comprises obtaining a stiction force value between the pair of thin films after the pair of thin films contact each other with the first controlled force between the thin films.
4. (Previously Presented) The method according to claim 1 wherein the predetermined characteristic is resistivity.
5. (Previously Presented) The method according to claim 1 wherein the predetermined characteristic is conductivity.

6. (Previously Presented) The method according to claim 4, wherein the step of performing comprises:

obtaining a resistance value for the pair of thin films when the pair of thin films contact each other due to the first controlled force; and
calculating a corresponding resistivity value.

7. (Previously Presented) The method according to claim 6 further comprising evaluating the resistivity value to determine if the pair of thin films is a conductor appropriate for use in the switch.

8. (Previously Presented) The method according to claim 5, wherein the step of performing comprises:

obtaining a conductance value for the pair of thin films when the pair of thin films contact each other due to the first controlled force; and
calculating a corresponding conductivity value.

9. (Previously Presented) The method according to claim 8 further comprising evaluating the conductivity value to determine if the pair of thin films is a conductor appropriate for use in the switch.

Cancel Claims 10-17.